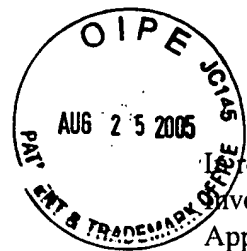


IFW



IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Patent Application

Inventors: Schwartz, et al.

Appln. No.: 10/666,804

Confirm. No.: 8739

Filed: September 19, 2003

Title: COMPOSITIONS OF POLYACIDS AND  
POLYETHERS AND METHODS FOR THEIR  
USE IN REDUCING ADHESIONS

PATENT APPLICATION

Art Unit: 1623

Examiner: Owens Jr. Howard V.

Customer No. 23910

**CERTIFICATE OF MAILING UNDER 37 C.F.R. §1.8**

I hereby certify that this correspondence is being deposited in the United States Postal Service with sufficient postage as first class mail in an envelope addressed to Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450, on August 22, 2005.

Thomas A. Ward (Attorney Signature)  
Thomas A. Ward, Reg. 35,732  
Signature Date: August 22, 2005

**INFORMATION DISCLOSURE STATEMENT UNDER 37 C.F.R. §1.56**

Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

Sir:

It is requested that the information identified in this statement be considered by the Examiner and made of record in the above-identified application. This statement is not intended to represent that a search has been made or that the information cited in the statement is, or is considered to be, material to patentability as defined in 37 C.F.R. §1.56. If this is a continuation, divisional or continuation-in-part application, it is understood that the Examiner will consider all information which was considered by the Office in a parent application. MPEP §609. Such information therefore is not listed herein unless it is desired that the information be printed on a patent issuing from the subject application.

***Enclosed with this statement are the following:***

- ☒ Form PTO-1449. The Examiner is requested to initial the form and return it to the undersigned in accordance with M.P.E.P. §609.
- I. ☒ International Search Report for PCT/US98/10814 (Attorney Docket NO. FZIO-01000WO0), date of mailing 16 October 1998.
- II. ☒ Communication Pursuant to Article 96(2) for Application No. 00 921 450.3 - 2107, date of mailing 15 June 2004, (Attorney Docket No. FZIO-06598EP0).

- III. ✓ Supplementary European Search Report, date of completion 22 January 2004, for Application No. EP 98 92 4928 (Attorney Docket No. FZIO-06598EP0).
- IV. ✓ Communication Pursuant to Article 96(2) for Application No. 98 924 928.9 - 2102 dated 13 May 2004, (Attorney Docket No. FZIO-06598EP0).
- V. ✓ Miscellaneous Communication, for Application No. 09/023,267, dated September 23, 1999, (Attorney Docket No. FZIO-01000US2).

✓ The present application is being/was filed after June 30, 2003. In accordance with the pre-official gazette waiver of 37 CFR 1.98 (a)(2)(i) posted at: [pac/dapp/opla/preognotice/idswouscopies.htm](http://pac/dapp/opla/preognotice/idswouscopies.htm), copies of cited U.S. patents and publications are not enclosed. However, copies of cited foreign patent documents and non-patent literature are enclosed in accordance with 37 CFR 1.98(a)(2), as still required, except for those items designated by an asterisk (\*), which were previously submitted by the applicant in a parent application, from which benefit under 35 U.S.C. §120 is claimed, with an *Information Disclosure Statement* submitted in the parent application which complies with the September 8, 2000 or subsequent revision of 37 C.F.R. §1.98(a-c), as allowed under 37 C.F.R. §1.98(d)(1).

— The present application was filed prior to June 30, 2003. A copy of each cited document as required by 37 C.F.R. §1.98 is enclosed, except for those items designated by an asterisk (\*), which were previously submitted by the applicant in a parent application, from which benefit under 35 U.S.C. §120 is claimed, with an *Information Disclosure Statement* submitted in the parent application which complies with the September 8, 2000 or subsequent revision of 37 C.F.R. §1.98(a-c), as allowed under 37 C.F.R. §1.98(d)(1).

— If any of the cited/submitted documents is in a foreign language, a concise explanation of relevance is provided pursuant to 37 C.F.R. §1.98(a)(3)(i). For foreign language documents cited in a search report by a foreign patent office, the requirement for a concise explanation of relevance is satisfied by the submission herewith of an English language version of the search report. MPEP §609A(3). If a written English-language translation of a non-English language document, or portion thereof, is within the possession, custody or control of, or is readily available to any individual designated in §1.56(c), a copy of the translation accompanies this statement, 37 C.F.R. §1.98(a)(3)(ii), and satisfies the requirement for a concise explanation of relevance, MPEP §609A(3).

— ***PTA Statement under 37 C.F.R. §1.704(d).*** Each item of information contained in the *Information Disclosure Statement* was cited in a communication from a foreign patent office in a counterpart application and this communication was not received by any individual designated in §1.56(c) more than thirty days prior to the filing of the *Information Disclosure Statement*.

***This statement should be considered because:***

✓ **37 C.F.R. §1.97(b).** This statement qualifies under 37 C.F.R. §1.97, subsection (b) because:

- (1) It is being filed within three months of the filing date of an application other than a continued prosecution application under § 1.53(d);

- OR --
- (2) It is being filed within 3 months of entry of a national stage;  
-- OR --
- (3) It is being filed before the mailing date of the first Office Action on the merits,  
-- OR --
- (4) It is being filed before the mailing date of the first Office Action after the filing of  
a Request for Continued Examination under 37 C.F.R. §1.114.

✓ **Fee Authorization.** The Commissioner is hereby authorized to charge any deficiencies or credit any overpayment to Deposit Account No. 06-1325. A duplicate copy of this authorization is enclosed.

Respectfully submitted,

FLIESLER MEYER LLP

Date: 8/22/05

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Form PTO-1449

U.S. DEPARTMENT OF COMMERCE  
PATENT AND TRADEMARK OFFICEAttorney Docket Number  
FZIO-01000US6Serial/Patent Number  
10/666,804Applicant/Patent Owner  
Schwartz, et al.Filing/Issue Date  
September 19, 2003Group Art Unit  
1623

Information Disclosure Statement

BY APPLICANT

(Use several sheets if necessary)

## U.S. PATENTS

Examiner Initial		Patent Number	Issue Date	First Named Inventor	Class	Subclass	Filing Date
	1	3,064,313	11/20/62	Butler	18	57	6/14/60
	2	3,328,259,	6/27/67	Anderson	167	84	1/8/64
	3	3,387,061	6/4/68	Smith, et al.	260	874	9/8/58
	4	4,024,073	5/17/77	Shimizu, et al.	252	316	2/21/75
	5	4,181,718	1/1/80	Mason, et al.	424	180	2/13/78
	6	4,442,258	4/10/84	Sumakawa, et al.	524	767	7/3/80
	7	4,585,858	4/29/86	Molotsky	536	401	1/11/71
	8	4,610,863	9/9/86	Tewari, et al.	423	338	9/4/85
	9	4,616,644	10/14/86	Saferstein, et al.	128	156	6/14/85
	10	4,684,558	8/4/87	Keusch, et al.	428	40	6/30/86
	11	4,713,243	12/15/87	Schiraldi, et al.	424	676	6/16/86
	12	4,768,523	9/6/88	Cahalan, et al.	128	785	12/15/86
	13	4,772,419	9/20/88	Malson, et al.	252	315.1	2/21/86
	14	4,853,374	8/1/89	Allen	514	57	6/9/87
	15	4,937,254	6/26/90	Sheffield, et al.	514	420	1/26/88
	16	4,937,270	6/26/90	Hamilton, et al.	514	777	9/18/97
	17	4,983,585	1/8/91	Pennell, et al.	514	57	11/3/88
	18	5,017,229	5/21/91	Burns, et al	106	162	6/25/90
	19	5,066,709	11/19/91	Chaudhuri, et al.	524	516	
	20	5,068,225	11/26/91	Pennell, et al.	514	57	8/10/90
	21	5,080,893	1/14/86	Goldberg, et al.	514	57	7/19/90
	22	5,093,319	3/3/92	Higham, et al.	514	55	1/24/91

U.S. PATENTS							
Examiner Initial		Patent Number	Issue Date	First Named Inventor	Class	Subclass	Filing Date
	23	5,140,016	8/18/92	Goldberg, et al.	514	57	5/8/91
	24	5,266,326	11/30/93	Barry, et al.	424	423	6/30/92
	25	5,298,488	3/29/94	Kojima, et al.	514	8	10/23/91
	26	5,354,790	10/11/94	Keusch, et al.	523	300	8/31/92
	27	5,356,883	10/18/94	Kuo, et al.	514	54	07/28/92
	28	5,374,446	12/20/94	Ferenz, et al.	426	611	12/10/93
	29	5,462,749	10/31/95	Rencher	424	484	4/26/94
	30	5,502,081	3/26/96	Kuo, et al.	514	777	08/18/94
	31	5,621,093	04/15/97	Swann, et al.	536	55.2	06/06/95
	32	5,681,873	10/28/97	Norton, et al.	523	115	10/14/93
	33	5,711,958	1/27/98	Cohn, et al.	424	423	7/11/96
	34	5,800,832	9/1/98	Tapolsky, et al.	424	449	10/18/96
	35	5,874,417	2/23/99	Prestwich, et al.	514	54	5/10/96
	36	5,906,997	5/25/99	Schwartz, et al.	514	781	6/17/97
	37	5,985,312	11/16/99	Jacob, et al.	424	434	1/26/96
	38	5,942,253	8/24/99	Gombotz, et al.	424	501	10/12/95
	39	5,955,096	9/21/99	Santos, et al.	424	434	6/25/96
	40	5,968,500	10/19/99	Robinson	424	78.08	10/15/97
	41	6,017,301	1/25/00	Schwartz, et al	514	781	2/13/98
	42	6,034,140	3/7/00	Schwartz	514	781	2/13/98
	43	6,133,325	10/17/00	Schwartz	514	781	2/18/99
	44	6,869,938	3/22/05	Schwartz	514	57	12/27/99
U.S. PATENT PUBLICATIONS							
Examiner Initial		Patent Application Publication Number	Publication Date	Applicant			
		US2005/0074495	April 7, 2005	Schwartz			

PENDING U.S. PATENT APPLICATIONS								
Examiner Initial		Application Number	Filing Date	First Named Inventor	Petition to Expunge? Yes   No			
FOREIGN PATENT DOCUMENTS								
Examiner Initial		Document Number	Publication Date	Country	Class	Subclass	Translation Yes   No	
		EP 0 138 572 A2	4/24/85	European Patent Office	C 08 B 37	08		
		EP 0 265 561 A1	10/27/86	European Patent Office	C 08B 37	08		
		EP 0 264 719 A2	4/27/88	European Patent Office	F04B9	117A		
		EP 0 193 510 A1	9/3/86	European Patent Office	C 08	B37/08		
		EP 0 581 581 A2	2/2/94	European Patent Office				
		JP 9-241973A	9/16/97	Japan				
		WO 84/03302	8/30/84	WIPO	C12P 19	04		
		WO 86/00912	2/13/86	WIPO	C 08 B 37	00		
		WO 89/02445	3/23/89	WIPO	C 08 B 37	08		
		WO 90/10020	9/7/90	WIPO	C 08B 37	08		
		WO 97/23564	7/3/97	WIPO	C 08L	63		
		WO 97/01345	6/1996	WIPO	A61K	35/78		
OTHER DOCUMENTS (Include author (if any), title, publisher and place of publication, date and pertinent pages)								
	1	Elkins, et al., <i>Adhesion prevention by solutions of sodium carboxymethylcellulose in the rat. I. Fertility and Sterility</i> , Vol. 41, No. 6, 926-928, June 1984						
	2	Wiseman, <i>Polymers for the Prevention of Surgical Adhesions</i> , Johnson & Johnson Medical, Inc., Arlington, Texas, 369-421						
	3	Merrill, <i>Poly(Ethylene Oxide) and Blood Contact, A Chronicle of One Laboratory</i> , 199-229						
	4	Chaikof, <i>Platelet Interaction with Poly(ethylene Oxide) Networks</i> , AIChE Journal, Vol. 36, No. 7, 994-1002, July 1990						
	5	Bottenberg, et al., <i>Development and Testing of Bioadhesive, Fluoride-containing Slow-release Tablets for Oral Use</i> , J. Pharm. Pharmacol., 43:457-464, 1991						
	6	Amiji, <i>Permeability and blood compatibility properties of chitosan-poly(ethylene oxide) blend membranes for haemodialysis</i> , Biomaterials, 16, 593-599, 1995						
	7	Dieckman, et al., <i>Carboxymethylcellulose in the Free Acid Form</i> , Industrial and Engineering Chemistry, Vol. 45, No. 10, 2287-2290						

OTHER DOCUMENTS (Include author (if any), title, publisher and place of publication, date and pertinent pages)		
8	Gurny, et al., <i>Bioadhesive intraoral release systems: design, testing and analysis</i> , Biomaterials, Vol. 5, 336-340, 1984	
9	Chen, et al., <i>Compositions Producing Adhesion Through Hydration</i> , 163-181	
10	Kulicke, et al., <i>Characterization of aqueous carboxymethylcellulose solutions in terms of their molecular structure and its influence on rheological behavior</i> , Polymer, Vol. 37, Number 13, 2723-2731, 1996	
11	Ohno, et al., <i>Interpolymer Complex Formation of Polysaccharides with Poly(ethylene oxide) or Poly(1-vinyl-2-pyrrolidone) through Hydrogen Bond</i> , Makromol. Chem., Rapid Commun., 2, 511-515, 1981	
12	<i>Acqualon, Sodium Carboxymethylcellulose, Physical and Chemical Properties</i> , Hercules, Inc., 1-27	
13	Didishelm, et al., <i>Hematologic and Coagulation Studies in Various Animal Species</i> , J. Lab. & Clin. Med., 866-875, June 1959	
14	Harris, et al., <i>Analysis of the Kinetics of peritoneal adhesion formation in the rat and evaluation of potential antiadhesive agents</i> , Surgery, 663-669, June 1995	
15	Becker, et al., <i>Prevention of Postoperative Abdominal Adhesions by a Sodium Hyaluronate-based Bioresorbable Membrane: A Prospective, Randomized, Double-Blind Multicenter Study</i> , Journal of American College of Surgeons, Vol. 183, 297-306, October 1996	
16	INTERCEED (TC7) Adhesion Barrier Study Group, <i>Prevention of postsurgical adhesions by INTERCEED (TC7), * an absorbable adhesion barrier: a prospective, randomized multicenter clinical study</i> , Fertility and Sterility, Vol. 51, No. 6, 933-938, June 1989	
17	Diamond, et al., <i>Reduction of adhesions after uterine myomectomy by Seprafilm* membrane (HAL-F): a blinded, prospective, randomized, multicenter clinical study</i> , Fertility and Sterility, Vol. 66, No. 6, 904-910, December 1996	
18	Sung, et al., <i>Swelling properties of hyaluronic acid ester membranes</i> , Journal of Membrane Science, 92, 157-167, 1994	
19	Braun, <i>Poly (Ethylene Oxide)</i> , Union Carbide Corporation, Union Carbide Chemical and Plastics Company, Inc., Specialty Chemicals Division, (Reprinted from Handbook of Water-Soluble Gums and Resins), pp. 19-1 - 19-33	
20	<i>Polyox Water-soluble Resins</i> , Association Compounds, Union Carbide Chemicals Division, p. 22, 1991	
21	<i>Sepra film™ Bioresorbable Membrane, Product Monograph for the Reduction of Postsurgical Adhesions</i> , Genzyme Corporation, 1-29, 1996	
22	Kitano, et al., <i>Viscous Carboxymethylcellulose in the Prevention of Epidural Scar Formation</i> , Spine, Vol. 16, No. 7, July 1991	
23	<i>Hercules Cellulose Gum, Sodium Carboxymethylcellulose, Chemical and Physical Properties</i> , Hercules, Inc., 1-31, 1984	
24	Takayma, et al., <i>Effect of Interpolymer Complex Formation on Bioadhesive Property and Drug Release Phenomenon of Compressed Tablet Consisting of Chitosan and Sodium Hyaluronate</i> , Chem. Pharm. Bull., 38(7), 1993-1997, 1990	
25	Aurora, et al., <i>Pathology of Peritoneal Adhesions - An Experimental Study</i> , Indian J. Med. Res., 62, 4, 539-544, April 1974	
26	Harland, et al., <i>Polyelectrolyte Gels, Properties, Preparation, and Applications</i> , American Chemical Society Symposium Series, November 11-16, 1990, 480	
27	Feddersen, et al., <i>Sodium Carboxymethylcellulose</i> , Industrial Gums, Polysaccharides and Their Derivatives, Third Edition, 537-579, 1993	
28	Steizer, et al., <i>Carboxymethylcellulose</i> , Handbook of Water-Soluble Gums and Resins Chapter 4, pp. 4-1 - 4-28, 1980	

OTHER DOCUMENTS (Include author (if any), title, publisher and place of publication, date and pertinent pages)		
29	Danishefsky, et al., <i>Conversion of Carboxyl Groups of Mucopolysaccharides into Amides of Amino Acid Esters</i> , Carbohydr. Res., 16, 199-205, 1971	
30	Tsuchida, et al., <i>Interactions Between Macromolecules in Solution and Intermacromolecular Complexes</i> , Advance Polymer Science, 45-122, 1982	
31	Anseth, et al., <i>Mechanical properties of hydrogels and their experimental determination</i> , Biomaterials, 17, 1647-1657, 1996	
32	Kofinas, et al., <i>Development of methods for quantitative characterization of network morphology in pharmaceutical hydrogels</i> , Biomaterials, Vo. 18, No. 20, 1361-1369	
33	Agrawal, et al., "Technique to Control pH in Vicinity of Biodegrading PLA-PGA Implants," John Wiley & Sons, Inc., 1997, pp. 105-114.	
34	Hunt, et al., "Silica Aerogel, A Transparent High Performance Insulator," Proceedings of the International Solar Energy Society World Congress, Sept. 13-18, 1987, Hamburg, West Germany, pp. 1-5.	
35	Tewari, et al., "Microstructural Studies of Transparent Silica Gels and Aerogels," Proceedings of the 1986 Spring Meeting of the Materials Research Society, April 15-19, 1986, Palo Alto, CA., pp. 1-11.	
36	Hunt, et al., "Process Considerations in Monolithic Aerogels," Materials Research Society, 1988, Materials Research Society Symposium, Vol. 121, pp. 679-684.	
37	Lenaerts, Ph.D., et al., "Bioadhesive Drug Delivery Systems," CRC Press, Inc., 1990, pp. 25-168.	
38	Lofftus, et al., "Colloidal and Kinetic Principles of Sol-Gel Processing," Advanced Materials '90, March, 1990.	
Examiner		Date Considered
<p>*EXAMINER: Initial if citation considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.</p>		
<p>*1 = Copy not submitted because it was submitted in prior application SN ____/____, filed _____, 20____, relied on under 35 USC §120.</p>		
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